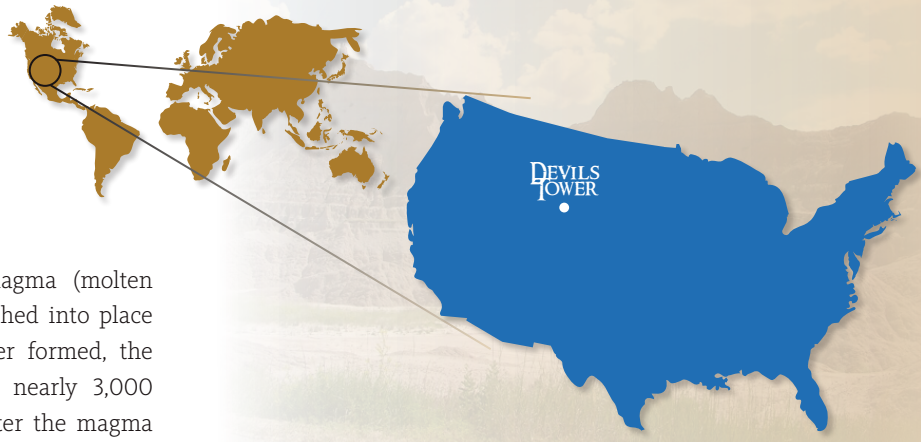
Towering above the flat landscape of Wyoming is one of the natural wonders of the world. Standing almost 1,300 feet (395 m) above the Belle Fourche River, Devils Tower is enjoyed by thousands of visitors each year and provides a challenge for any adventurous rock-climber. Devils Tower, an impressive formation amid a relatively flat region, raises natural questions among many viewers as to how it formed. Careful interpretation of the evidence in and around Devils Tower tells us the history.



The Tower

Formation

This formation was created when magma (molten volcanic rock inside the earth) was pushed into place underground. At the time Devils Tower formed, the surface of the surrounding land was nearly 3,000 feet (915 m) higher than it is today. After the magma hardened and cooled, the area was then eroded away. There are two theories about how Devils Tower formed. One theory holds that Devils Tower is a *laccolith*. A laccolith is a large mass of igneous (volcanic) rock which intruded through sedimentary rock beds but did not actually reach the surface, producing a rounded bulge in the sedimentary layers above. The other theory is that Devils Tower is a volcanic plug, or the neck of an extinct volcano. The composition of the volcanic material that makes up Devils Tower suggests that the magma body was fairly thick when it formed, thus enabling it to maintain the shape it presently has. A thinner magma body would form a hard layer over a wider area that resists erosion and remains a flat plateau. But, since it was relatively thick, the magma pushed into a massive lump, forming its visible shape. The magma then solidified, preserving Devils Tower.

Columns

Devils Tower is made up of spectacular vertical columns of igneous rock with five or six sides each. At the base, these columns are about 7 feet (2 m) wide, and they decrease in size to around 4 feet (1.2 m) at their peak. The columns are composed of rock containing fine-grained minerals that suggest they formed quickly and solidified at a shallow level. The columns of Devils Tower are nearly the same height, which suggests that the whole had once been a single magma pool but had fractured into separate columns as it cooled.

Erosion

Erosion of the surrounding rock layers played a key role in exposing the solidified magma. Two separate stages of erosion are suggested to have taken place to expose what is seen today. The first erosional event leveled the